29th Session of the Sub-Committee of Experts
on the Transport of Dangerous Goods (UNSCOE TDG)
3-12 (a.m.) July 2006
Summary of Results

Note: This was the third of the TDG Sub-Committee's four meetings scheduled to be held during the 2005/2006 biennium. The main purpose for this meeting was to consider proposed amendments and updates to the UN Recommendations on the Transport of Dangerous Goods, also known as the UN "Model Regulations". The amendments developed by the Sub-Committee during the four meetings in this biennium will be submitted for final consideration and approval at the 3rd session of the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals in December 2006. Once approved by the Committee, the amendments will be incorporated into the 15th Revised Edition of the UN Model Regulations and will be incorporated into the IMDG Code and ICAO TI from January 1, 2009.
UN Papers for the 29th session may be downloaded from the UN Transport Division website at:
http://www.unece.org/trans/main/dgdb/dgsubc/c32006.html
Visit the website of the Office of Hazardous Materials Safety's Director of International Standards at:
http://hazmat.dot.gov/intstandards.htm for pertinent information relative to the office's international activities including: Schedules of International Meetings, UN Committee and Sub-Committee of Experts on the Transport of Dangerous Goods, International Atomic Energy Agency, International Maritime Organization's Dangerous Goods, Solid Cargoes and Containers (IMO DSC) Sub-Committee, International Civil Aviation Organization (ICAO) Dangerous Goods Panel, European Agreements Concerning the International Carriage of Dangerous Goods by Road (ADR) and Rail (RID), and the North American Free Trade Agreement (NAFTA) Hazardous Materials Land Transportation Standards Sub-Committee.

Paper #	Paper Title/Summary	Comments and Results
	Adoption of the Agenda	
	AGENDA ITEM 2 – TRANSPORT OF EXPLOSIVES	
2005/11	**Procedure and criterion for the modified vented pipe test** (Spain) – In this paper, Spain claims there is a problem with the Series Test 8(d) Vented Pipe Test in the Manual of Tests and Criteria for establishing if ANE can be assigned to Class 5.1 and is suitable for transport in tanks. They state the test does not specify the heating rate that the sample must be subjected to; thus, the test is not reproducible. They are proposing an Alternative Vented Pipe Test as originally suggested by Australia.	The paper was presented to the 27th session of the SCOE and placed back on the agenda for consideration by the Explosives Working Group. **Result:** This proposal was adopted with some editorial corrections.
2005/29	**Classification of 1 – hydroxybenzotriazole, anhydrous (HoBt), under Division 1.1D (Germany)** – Germany proposes to add the PSN 1-hydroxybenzotriazole, anhydrous to the DGL as a division 1.1D material. The paper notes that test results show that the substance meets the definition	We supported this proposal in principle based on the fact that this substance has high sensitivity toward "heating under confinement" i.e.

	of a Division 1.1D material. Germany proposes a new entry be added to the Dangerous Goods List to ensure that shippers are aware of this potential hazard and appropriately classify the material.	results from Konen Test and Time/Pressure Test. This paper was presented at the last session and the Sub-Committee, along with the U.S., agreed that this substance may meet the criteria for a Class 1 substance, but did not agree the test data supported its classification in Division 1.1D.
INF.22	**Classification of 1-hydroxybenzotriazole, anhydrous (HOBt), under a division of Class 1** (Germany)	**Result:** The Sub-Committee adopted entries for 1-hydroxybenzotriazole, anhydrous as a Class 1.3C, and 1-hydroxybenzotriazole wetted with 20% or more water as a desensitized explosive in Class 4.1. The working group considered the monohydrate form but determined additional information was necessary to justify an entry in Class 4.1.
2006/7	**Mixed transport of goods of Class 1 with dangerous goods of other classes - Mixed transport of explosives and nitrates** (Norway) - This paper proposes to amend the text in 7.1.3.2.3 to clarify which inorganic nitrates are referenced. The text currently reads: *"...ammonium nitrate and inorganic nitrates of Class 5.1 (UN Nos. 1942 and 2067... "* and Norway proposes that it be amended to read: *"…ammonium nitrate (UN Nos. 1942 and 2067) and inorganic nitrates of Class 5.1 (UN. Nos. 1477 and 3218)…."*.	The proposed amendment in this paper was editorial in nature and the U.S. supported the proposal. **Result:** This proposal was adopted, but the final text was changed to read "… (UN1942 and UN2067) and alkali metal nitrates (e.g. UN1486) and alkaline metal nitrates (e.g. UN1454)."
2006/29	**Carriage of signals and flares in Divisions 1.4G and 1.4S** (United Kingdom) - This paper proposes several new entries to address the transport of marine distress signals on the basis that the Divisions assigned to the proposed entries are not covered by the currently authorized proper shipping names for distress signals.	**Result:** The U.S. supported this proposal. The addition of three new entries was adopted.
2006/62	**Additional test for determining 1.4S classification.** The expert from Canada states that the 1.4S classification criteria rely solely on the results of	The U.S. submitted an informal document under INF.29. We did not

	the Manual of Tests and Criteria 6(c) test. However, the definition of Class 1.4 includes other characteristics that are not determined by the 6(c) test. This paper suggests that the portion of the definition for 1.4S, "any hazardous effects arising from accidental functioning are confined within the package", is not addressed by the current required testing. The expert from Canada proposes that a new test, numbered 6(d), be added to determine those requirements for which there is no current test. The 6(a) test can serve as a basis to determine the effects outside the package in case of ignition during transport. After completing the test series 6(a), 6(b) and 6(c); 6(d) would be conducted. The product in question would be initiated in the same manner as prescribed in Test Series 6(a). Items provided with their own means of initiation would use those means unless it is impractical or unsafe to do so. If the item did not include its own means of initiation, the intended means of initiation should be used. This paper is a revision of ST/SG/AC.10/C.3/2005/22 submitted by the Expert of Canada to the Twenty-seventh Session of the UN Sub-Committee of Experts on the Transport of Dangerous Goods in July 2005. The changes include: (1) the proposed 6(d) test would be optional, (2) the new test would only be used for a candidate 1.4S article or substance which contains detonating explosive, or the classification is packaging-dependent, and (3) the new test would not be used for materials that are inherently Division 1.4S.	support this proposal because the combined results of Test Series 4(a), 4(b)(ii), 6(a), 6(b) and 6(c) are sufficient to verify that the effects arising from accidental functioning are confined within any package assigned a Division 1.4S classification. **Result:** Several experts expressed sympathy for the proposal, especially concern for the air transport of shape charges. However, many experts felt the results of the 6(a) test could be used to assess the effects on the package and that a separate test was unnecessary. Others were concerned that the test can not differentiate the effect that the means of initiation has on the overall results, which makes it more difficult to determine whether the effects are confined within the package. Canada indicated they would submit a new proposal based on the comments received.
INF.29	**Comments on ST/SG/AC.10/C.3/2006/62** (USA)	
2006/61	**Amendments to Chapter 2.1 of the GHS (Explosives)** (SAAMI) - In this paper SAAMI asks that the GHS Sub-Committee reconsider its decision to change the pictogram for 1.4 explosives from the "1.4" marking to an exploding bomb on the basis of a proposal submitted by Norway (ST/SG/AC.10/C.4/2004/12). SAAMI believes that the symbol overstates the hazard posed by 1.4S explosives and is particularly concerned about its effect on the transport of small arms ammunition. SAAMI states that requiring two distinct markings (the "1.4" marking for transport and the exploding bomb marking for worker/consumer safety) could cause confusion since both markings may simultaneously appear on a package	**Result:** The U.S. supported this proposal and agreed that applying exploding bomb symbols to 1.4S products is unnecessary. We believed that a more general approach for 1.4S products should be used, not limited to sporting ammunition. Other experts stressed that, once outside the packaging, some products might behave differently and show more

	which is used for transport and in the workplace. In addition, having different markings for packages used in transport and packages used in the workplace could mistakenly lead people to believe that the hazard posed in the workplace is greater than the hazard posed in transport. Finally, SAAMI argues that having two different markings is contrary to the goal of the GHS which is to promote a unified hazard communication system across sectors. As such SAAMI recommends that the GHS Subcommittee adopt the "1.4" pictogram for cartridges, small arms (UN 0012 and UN 0014) and cartridges, power device (UN 0323). SAAMI proposes this be accomplished through a note in Chapter 2.1 (Table 2.1.2) and in Annex 1 under Division 1.4, as follows: "Small arms ammunition (cartridges for weapons and cartridges, power device) classified as Division 1.4S UN 0012, UN 0014 and UN 0323 in accordance with the UN Recommendations on the Transport of Dangerous Goods, Model Regulations are assigned the "1.4S" marking."	hazardous effects. For several situations, like consumer use, it may be important to communicate that the product contains materials with explosive properties. The majority of the Working Group was not in favor of removing the exploding bomb sign for certain 1.4S products. SAAMI indicated they would submit a new proposal at the next session including a more specific description of the products concerned.
INF.65	**Report of the Explosive Working Group**	
	AGENDA ITEM 3 – TRANSPORT OF GASES	
2006/1	**Salvage packagings** (EIGA) – In this paper EIGA proposes requirements be added to Chapter 6.2 for salvage packagings designed for the transport of packagings containing gases of Class 2, and that the provisions be referenced in 4.1.1.1.7.2.	The U.S. supported the proposal in principle. Although more detailed, 173.3(d) of the HMR contains provisions similar to those proposed. We made recommendations to improve EIGA's proposal: 1. EIGA proposed the term "Salvage receptacle", the HMR uses the term "Salvage cylinder". Receptacle is broadly defined in 1.2. Although the final package may not be under pressure, the provisions are more appropriate to those of pressure receptacles. 2. The proposed 6.2.1.1.9(d) required a hydraulic test at the design pressure of the salvage receptacle prior to approval and requalification. What was

		meant by design pressure is unclear. The HMR requires an internal and external visual examination in addition to a pressure test. The HMR also specifies a minimum test pressure of 1.5 times the MAWP for 30 seconds. **Result:** The U.S. and CGA provided comments related to the requirements in 173.3(d). Some delegations questioned the proposed term of "Salvage Receptacle", indicating "Salvage Pressure Receptacle" or "Salvage Cylinder" may be more appropriate. Most delegations seemed to favor inclusion of some provisions, especially to deal with situations when cylinders are found buried and must be transported to a disposal facility. CGA and the U.S. will provide EIGA the procedures used in the U.S., and EIGA indicated they would come back with a revised proposal at the next session.
2006/2	**Proposals to update the references to ISO standards for the classification of flammable gases and gas mixtures** (EIGA) – This paper proposes that a reference to ISO Standard 10156-2:2005 be included in both the UN Model Regulations and the GHS to draw in an updated method for determining the oxidizing potential of a gas. Under the current UN Model Regulations, a gas which has an oxidizing potential exceeding that of air is considered oxidizing. The updated standard includes a test method for calculating this potential.	The U.S. did not support the proposal. Both ISO Standard 10156 and 10156-2 contain a cut-off of 23.5% when oxygen is the oxidizer and 21% when the mixture contains another oxidizer. The UN Model Regulations SP 292 assigned to UN1002 Air Compressed establishes the level of oxygen content to be considered an oxidizer at above 23.5%.

		Result: The Sub-Committee adopted this proposal by a majority vote. Some delegations, including the U.S., preferred to wait on including these references. The ISO standards set an oxygen-nitrogen ratio of mixtures at 21% to be considered oxidizing. This differs from SP 292 that provides a higher value of 23.5% to take into account a slight variance for compressed air. CGA and the U.S. indicated that the ISO standards were under review to consider raising the oxidizing percentage to 23.5% for all mixtures and preferred to wait until that work was complete. This amendment was later adopted by the GHS Sub-Committee.
2006/4	**Proposal to harmonize the values in UN Recommendations, GHS and RID/ADR** (EIGA) – In this paper EIGA proposes amending the exception for gases in 2.2.2.3 to read as follows: "Gases of Division 2.2, other than ~~refrigerated~~ liquefied gases if they are transported at a pressure of less than ~~280~~ **200** kPa at 20 °C." EIGA notes that the exception does not specify whether the 280 kPa value refers to absolute or gauge pressure. The paper suggests the measurement should be in gauge pressure. By expressing the limitation as gauge pressure, the resulting pressure under which gases are excepted from the transport regulations will rise from 280 kPa to 300 kPa absolute (a difference of only 20 kPa).	The U.S. opposed removing the word "refrigerated" and pointed out that doing so would broaden the scope of the regulations by requiring all liquefied gases to be classified in Division 2.2. We suggested if the Sub-Committee did agree to exclude both refrigerated liquefied gases and liquefied gases they would have to state both individually as they are defined separately. EIGA proposed to express the exception for Division 2.2 gases in gauge pressure instead of absolute pressure. The U.S. pointed out the Secretariat bringing this issue to the Sub-Committee at the 27th session in INF.18 (Harmonization with the

		ADR/RID) stating that the word absolute may have been omitted from the exception. The report from the 27th session, item 87 states: "Exemption of gases in 2.2.2.3: the 280 kPa pressure referred to is an absolute pressure. This is indeed in contradiction with 1.2.2.5, therefore the word "absolute" should be inserted before "pressure" in 2.2.2.3" **Result**: The Sub-Committee agreed to this proposal to amend the exception values using gauge pressure as the unit of measure. They further changed the exception to specifically indicate it does not apply to liquefied or refrigerated liquefied gases. The amendment was later adopted by the GHS Sub-Committee.
2006/17	**Amendment to Chapter 6.2 to update references to ISO standards** (ISO) - This paper proposes to update the ISO Standards referenced in 6.2.2.4 with the following: ISO 6406:2005 Seamless steel gas cylinders-Periodic inspection and testing. ISO 10461:2005 Seamless aluminium-alloy gas cylinders-Periodic inspection and testing. ISO 10462:2005 Transportable cylinders for dissolved acetylene-Periodic inspection and maintenance.	**Result**: The U.S. supported this proposal and it was adopted. Although the proposal was submitted well in advance, some delegations were concerned they had not been provided copies of the ISO standards to review prior to the meeting. There was a suggestion for the Sub-Committee to consider establishing a Standards Working Group to review standards and determine their appropriateness for inclusion in the UNMR (similar to a process within the Joint Meeting). The Working Group would ensure that standards were in compliance with the UNMR prior to Sub-Committee adoption.

		The U.S. was not in favor of establishing another working group and stated that all delegations are welcome to participate in the development process. The ISO representative stated he could get copies to any delegation that requested them. No proposal or decision was made on the issue of a Standards Working Group.
2006/26	**Proposals to amend Chapter 6.2** (Germany) - This paper proposes a number of technical amendments to requirements for the transport of acetylene.	The U.S. agreed with the editorial amendments proposed by Germany. However, we opposed adding additional requirements, such as new markings proposed in section 7. These additional requirements provide no safety benefits. **Result**: The proposals in section 2 and 6 were adopted. The proposal in section 3 was not adopted because the Sub-Committee felt the definition of Competent Authority was clear in this case. The proposals in section 4 and 5 had numerous comments and Germany indicated they might bring back a future proposal. The proposal under section 7 dealing with new markings was withdrawn. The U.S. was opposed to this marking proposal as we felt the current markings were adequate and agreed to by the gases working group. Further, additional markings would cause difficulties with spacing and costs.
2006/39	**P200 Special Provision "d"** (USA) **–** This paper proposes that, in Packing	The U.S. submitted INF.21 which

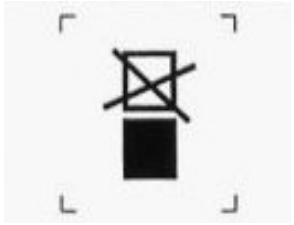
INF.21	Instruction P200, references to special provision “d” be deleted from the entries for Arsine (UN2188), Germane (UN2192), Phosphine (UN2199), and Silane (UN2203). Special provision “d” requires the cylinder to bear an “H” mark to show that the cylinders have been protected against hydrogen embrittlement. As hydrogen does not readily dissociate from these gases, hydrogen embrittlement is not a relevant hazard and such protection is considered unnecessary. **P200 Special Provision "d"** (USA)	provided technical justification in support of this proposal. **Result**: Some delegations expressed a need for additional time to review the detailed technical report on this U.S. proposal. Others pointed out that the report provided data only for silane and nothing in the proposal allowed them to consider the other 3 gases. Noting that no one expressed opposition to the proposal as it related to silane, the U.S. decided to bring a new proposal to the next session taking into account the comments received.
2006/40	**Filling Ratio for Germane** (USA) **–** This paper proposes a revised filling ratio for Germane, UN2192. The proposed value of “0.063” is a conservative value and is 2/3 of the ratio deemed safe by an independent study which showed that the maximum value for germane in light of its decomposition potential should be .096 for a 250 bar cylinder.	The U.S. submitted this paper to follow up on comments made by the Sub-Committee in the adoption of a U.S. proposal at the previous session (2005/55). CGA also submitted a document on this issue with additional technical discussion. See 2006/44. **Result**: The U.S. explained the work of the Sub-Committee that led to the development of this proposal. However, since this proposal was substantially the same as that submitted by CGA, the U.S. deferred to the experts of CGA for consideration of their proposal 2006/44.
2006/44	**Filling ratio for germane** (CGA) – This paper proposes a number of amendments to P200 related to Germane. Specifically, the paper proposes to:	The U.S. supported this document as it corresponds to the U.S. proposal in 2006/40.

	-Amend the filling ratio for Germane to be 0.064 -Add a new special provision "r" to state that "the filling ratio of this gas shall be limited such that, if complete decomposition occurs, the pressure does not exceed two thirds pressure of the pressure receptacle" and apply the new special provision to Germane and reference it in P200(3)(b). -Add a new sentence to special provision "z" to state that "Mixtures containing UN2192 germane, other than mixtures of up to 35% germane in hydrogen or nitrogen or up to 28% germane in helium or argon, shall be filled to a pressure such that, if complete decomposition of germane occurs, two thirds of the test pressure of the pressure receptacle shall not be exceeded".	**Result**: The Sub-Committee adopted this proposal.
2006/41	**P200 filling Ratio Amendments** (USA) **–** This paper proposes amended filling ratios for several gases (UN1982, UN2599, UN1035, UN3220, and UN1011)**.** The increased filling ratios are supported by a NIST study sponsored by the U.S. The values were attained using the filling conditions specified in P200 and take into account experimental data.	**Result**: This proposal was adopted. The U.S. explained the work that had gone into evaluating the current filling ratio values for liquefied gases in P200. It was discussed that there could be more amendments as the experts continued their review, and the Sub-Committee expressed an interest in finalizing this work. The U.S. agreed to work with CGA, EIGA and other interested experts to attempt to finalize the amendments through a proposal to the next session. CGA also presented INF.26 but the Sub-Committee was not prepared to address a proposal from this informal document.
INF.26	**P200 Filling ration and working pressure amendments** - (CGA)	**Result**: The Sub-Committee was not prepared to adopt this proposal from an informal document. CGA was encouraged to work with the U.S. and others to identify all of the gases that required amended values and bring a new proposal to the next session.
	AGENDA ITEM 4 – PACKAGINGS (INCLUDING IBCs AND LARGE PACKAGINGS)	

2006/59 **INF.61**	**Drop test** (France) In this paper France proposes to reference ISO standard 2248 with respect to the target surface used during drop testing of packages including IBCs. France suggests that the current description of a "rigid, non-resilient, flat and horizontal" surface in the UN Model Regulations is insufficient. The reference is proposed for inclusion in 6.5.6.9.3, 6.1.5.3.4, 6.3.2.5(a) and 6.6.5.3.4.3. **Drop Test** (France)	The U.S. did not support referencing the ISO standard as proposed by France. We preferred to simply amend the description of the surface in the UN Model Regulations. **Result**: Rather than adopt the reference to the ISO standard, the Sub-Committee decided to adopt the relevant text from the standard into the UNMR. France submitted a room document (INF.61) taking into account the comments from the Sub-Committee. INF.61 was adopted with some minor amendments.
2006/14	**Reference to standard ISO 16106** (Germany) **–** Currently the UN Model Regulations require packagings to be manufactured and tested under a quality assurance program which satisfies the competent authority. This paper proposes to add a reference to ISO Standard 16106 as a satisfactory method of complying with the quality assurance requirements. The following text is proposed to be added: "Quality assurance programmes established in accordance with EN ISO 16106: 2006 Packaging-Transport packages for dangerous goods-Dangerous goods packages, intermediate bulk containers (IBCs) and large packagings-Guidelines for the application of EN ISO 9001- shall be considered as satisfactory."	The U.S. did not believe a reference to a non-binding quality assurance standard provided much value. **Result**: Some delegations, particularly ADR/RID contracting members, felt this proposal was useful and would provide standardization within those countries that adopted its use. The Sub-Committee agreed to include a note that the ISO standard contained provisions that were considered acceptable to meet the quality assurance requirements of these sections.

2006/20	**Bottom lift test for IBCs** (ICPP)(ICCA) - In this paper ICCP and ICCA note that the amended pass/fail criteria for the bottom lift test for IBCs as adopted by the SC this biennium is overly conservative. The paper notes that during the test it is unreasonable to expect that no permanent deformation of the IBC will occur when the fork lift tines are inserted only ¾ of the way beneath the IBC. The paper proposes that that the text of 6.5.4.4.4 be reverted to the current text as set out in the 14th revised edition of the Model Regulations which states: *No permanent deformation which renders the IBC, including the pallet base, if any, unsafe for transport and no loss of contents.* This would continue to allow for some minimal deformation to occur provided it did not render the IBC unsafe for transport.	The U.S. supported returning to the 14th Rev. Ed. text for the IBC bottom lift test acceptance criteria. The text agreed to at the last session of the UN TDG SCOE was based in part on a recommendation from the Report of the Informal Working Group (28/INF.5) on IBC testing. However, the Informal Working Group's recommendation for "permanent observable deformation" was expressed as distortion of the external dimensions of the IBC, or its fixtures and fittings, exceeding 0.5%. Without providing for a tolerable level of distortion, the term "permanent observable deformation" is too extreme. **Result**: The Sub-Committee agreed with the U.S. and, by majority vote, adopted this proposal to revert back the text in the 14th Rev Ed. Three informal documents were presented by ICIBCA, ICCR, and China. The current text will remain unchanged.

2006/24 **INF.19**	**Hydraulic pressure test for IBCs** (Germany) **–** This paper proposes a revised hydraulic pressure test with revised pass/fail criteria. New markings to indicate compliance with the revised test are also proposed. **Hydraulic pressure test for IBCs – Comments on ST/SG/AC.10/2006/24** (Canada)	The U.S. opposed this proposal. Germany provided no justification for adding a new test requirement and we did not see a need for a new pressure test. **Result**: Several experts expressed that this test might be a good idea, but the proposal needed more work. Germany withdrew this proposal and indicated they would submit a new proposal to the next session.
2006/25	**IBCs UV Protection** (Germany) - This paper proposes to require UV Protection for certain plastic packagings including rigid plastic IBCs and composite IBCs with plastic inner receptacles. In addition to several amendments of a general nature, the following performance oriented text is proposed: "Protection against ultraviolet radiation shall be provided by the addition of inhibitors, carbon black or other suitable pigments. The plastics materials of the inner receptacle and service equipment shall be resistant to a radiant exposure of ≥6,3 GJ/m2 in combination with water spraying, determined in accordance with ISO 4892 - Plastics – Methods of exposure to laboratory light sources - , using samples in accordance with ISO 527 ((title)) and using a reduction of initial elongation at break to 50% as the test criterion. This requirement does not apply if the material is protected against ultraviolet radiation by secondary means."	The U.S. opposed this proposal. We felt the exposure rate was unreasonable. **Result**: Several experts were concerned there was not a need for this proposal. The expert from Germany expressed that since the Sub-Committee seemed to show general support at the previous session, she would bring back a new proposal based on the comments received.

2006/30	**Displaying the safe stacking load on IBCs** (United Kingdom) - This paper addresses issues associated with displaying safe stacking loads on IBCs. It proposes the use of symbols from ISO 780:1999, making it easier for personnel such as forklift truck drivers to identify and understand stacking requirements and stacking weight limits for IBCs. The proposed symbols are as follows:  IBCs capable of being stacked during transport  IBCs NOT capable of being stacked during transport The requirement is proposed to be applied to all IBCs manufactured, repaired or remanufactured on or after 1 January 2009.	The U.S. noted that this marking could contribute to better handling of IBCs during transportation. Improper handling can be linked as a cause or as a contributing factor of many of our documented incidents. **Result:** The proposals contained in paragraphs 5, 6 and 7 were adopted. Additionally, the text was clarified to indicate that the mark placed on the IBC should be the test load divided by 1.8.

2006/32 **INF.16** **INF.17** **INF.18** **INF.35** **INF.69**	**Vibration test for design types of IBC intended for the transport of dangerous goods** (France/USA) –Based on the results of the IBC Working Group meeting in Paris (UN/SCETDG/28/INF.5), the SCOE agreed in principle at its 28th Session to consider a vibration test for IBCs. The proposed test would apply as a design type test to all IBCs types, other than flexible, beginning 1 January 2011. **Bottom lift test for IBC's** (ICIBCA) **Vibration test for IBCs** (ICIBCA) **Vibration test** (Canada) **Comments on ST/SG/AC.10/C.3/2006/32 - Vibration test** (Germany) **Revision of ST/SG/AC.10/C.3/2006/32** (USA and France)	The U.S. has been working for years to introduce into the UN Model Regulations a vibration test or capability standard consistent with the HMR. This proposed test is consistent with 178.819, while clarifying the method and acceptance criteria **Result:** After the initial discussion on details of the proposal, the principle of introducing a vibration test was voted on and agreed to by the Sub-Committee by a close margin. A lunch time working group was held and led by the Vice-Chair from Canada. Amendments from the initial proposal included applying the test only to liquids, clarification of the test method related to the shim placement, and the test acceptance criteria. The U.S. redrafted an informal document with amendments and worked with France, Canada, Australia, and industry (among others) to coordinate an agreed upon text. An informal paper (INF.69) was then presented back to the Sub-Committee and with three additional modifications, the proposal was adopted. Canada requested the text related to the placement of the metal shim during the test be placed in square brackets so that they could have additional time to review the text with the intent of improving it for the next session.

2006/6	**Requirements for the construction and testing of packagings - Materials used for their construction** (Norway) – In this paper Norway notes the growing use of rubber polymers for packagings and proposes that the sub-committee consider whether such polymers can be considered as plastic materials. Norway is of the opinion that they should be considered plastic materials and proposes that the definition for the "H" specification for plastic be amended to read: "Plastics materials (including rubber polymers)".	The U.S. has had similar issues with novel packaging materials. **Result**: Several experts, including the U.S., did not support the introduction of a new packaging code for these rubber polymers. It was generally agreed these polymer materials could be considered as plastic polymers. It was suggested they could be included under the definition of plastics and moved from Chapter 6.5 to 1.2. It was also suggested the solution could be to use the "W" marking as for 1H2 plastic drums. Norway was only requesting comments and indicated if necessary they would bring a future proposal to the Sub-Committee.
	AGENDA ITEM 5 – LIMITED QUANTITIES	
2006/45	**Excepted quantities** (United Kingdom) - The UK proposes to add provisions for dangerous goods packed in excepted quantities to chapter 3.5. This paper is a revised proposal to a paper the UK presented at the last session to introduce Excepted Quantity provisions based on the existing ICAO air mode requirements. The Sub-Committee has discussed at length the issue of reforming the limited quantity provisions with the intent of establishing acceptable requirements to enhance harmonization between transport modes. This paper attempts in take into account comments received from their last proposal. The UK proposes to create a "code" system that would identify whether excepted quantities are authorized and the quantity allowed for a given substance. The code system is as follows:	The U.S. supported this paper. Inclusion of these provisions is justified by the extensive experience within the air mode of transport of excepted quantities without significant incident. **Result**: After the Sub-Committee expressed general agreement to the concept of excepted quantities, the paper was referred to two lunch time working groups to finalize the details. The U.S. was an active participant in these informal working groups. The original proposal was amended to: use the term "None" instead of a code when the provision is not authorized,

	<table><tr><td>Code</td><td>Inner</td><td>Outer</td></tr><tr><td>E0</td><td colspan="2">Not permitted as Excepted Quantity</td></tr><tr><td>E1</td><td>30g/30mL</td><td>1kg/1L</td></tr><tr><td>E2</td><td>30g/30mL</td><td>500g/500mL</td></tr><tr><td>E3</td><td>30g/30mL</td><td>300g/300ml</td></tr><tr><td>E4</td><td>1g/1mL</td><td>500g/500mL</td></tr><tr><td>E5</td><td>1g/1mL</td><td>300g/300ml</td></tr></table> The Code would appear in the Limited Quantities column of the Dangerous Goods List. **INF.3/Rev.1** **Addendum to ST/SG/AC.10/C.3/2005/45** (UK) – Excepted quantities **INF.72** **Revision 1 of ST/SG/AC.10/C.3/2006/45** (UK) **INF.73** **Revision 2 of ST/SG/AC.10/C.3/2006/45** (UK)	clarify the package drop test requirements, to provide for the marking in either red or black hatch border, and placing a limit for the number of packages allowed in a transport unit utilizing the excepted quantities provision. The amended provisions, as adopted by the Sub-Committee were presented in INF.73.
2006/49	**Exemption for small quantities of pharmaceutical research and development samples** (ICCA)(DGAC) – This paper proposes an exception for pharmaceutical samples of Division 6.1 PG II or PG III. The provision would except from regulation samples in inner packagings of <1mL/1mg provided the outer packaging met certain performance criteria, did not contain more than 500 mL/500 g, and weighed less than 30 kg.	We generally supported this proposal. However, we questioned the limitation of this provision to only pharmaceutical samples and the outer packaging limits. We noted the PG II limit is identical to the current proposed limit for excepted quantities of Division 6.1. **Result**: Several experts supported the concept of providing an exception for these materials. However, there were several issues raised specifically, including materials in PG I and the maximum amount authorized per package. There were some comments that the maximum per package seemed high and that they were the same as the quantities

		proposed for the excepted quantities provisions. Some indicated they felt these materials could be transported under the excepted quantities provisions. ICCA indicated they would consider submitting a new proposal based on the comments received.
2006/56	**Miscellaneous proposals** (Secretariat) - This paper proposes several amendments to Column 7 (Limited Quantities authorizations) for various dangerous goods and requests discussion on several issues related to limited quantity values for certain substances. In summary, the paper: 1) Requests the Sub-committee consider the limited quantity value for UN 3357, Nitroglycerin mixture, desensitized liquid, n.o.s. with not more than 30% nitroglycerin by mass 2) Proposes that the word NONE be added to Column 7 for UN0504, UN3354, UN3355, and UN3374. 3) Proposes several water reactive liquid entries (UN3129, UN3130, and UN3148) have their units of measure corrected from grams/kg to ml/L 4) Questions whether oxygen generators should receive a LQ value 5) Suggests the guiding principles document be corrected with respect to the limits for Division 5.1, PG II and that limits be added for liquids	1) The U.S. was opposed to adding a limited quantity value for UN 3357. 2) We supported adding "NONE" to UN0504, UN3354, UN3355 and UN3374 – explosive materials and flammable/toxic gases are not generally authorized as LQs. 3) We supported the proposed corrections to the units of measure for the noted water-reactive entries. 4) We oppose providing a limited quantity provision for oxygen generators. 5) We supported the proposed amendments to the Guiding Principles concerning Division 5.1 PG II materials. **Result:** The Sub-Committee agreed to the proposals from the Secretariat, except they did not agree to add a limited quantity provision to UN3357 or to oxygen generators.
	AGENDA ITEM 6 – LISTING, CLASSIFICATION AND PACKING	

	Agenda Item 6(a) Batteries and Fuel cells	
2005/43	**Discussion of issues on PRBA's lithium ion battery proposals** (PRBA) – The paper is for information only and responds to comments made during the twenty-seventh session of the UN Sub-Committee. It also addresses informal comments PRBA received from the Sub-Committee and provides additional information on lithium ion battery technology.	This paper contained no proposals. The document was intended to provide a technical analysis to support the other 3 PRBA papers. The U.S. submitted technical comments to this document in INF. 42.
INF.42	**Comments on ST/SG/AC.10/C.3/2005/43 - Lithium ion battery** (USA)	
2005/44	**Proposed amendment of lithium ion cell and battery size limits in SP 188** (PRBA) – This paper contains two proposals: (1) Amend SP 188 and (2) amend 38.3.2.2 of Test Manual (ST/SG/AC.10/11/Rev.4, published in 2003) (Note: PRBA's paper cited 38.3.3.2 based on Rev.3 published in 1999).	This paper contained two proposals: (1) Amend SP 188 and (2) amend 38.3.2.2 of Test Manual (ST/SG/AC.10/11/Rev.4, published in 2003) (Note: PRBA's paper cited 38.3.3.2 based on Rev.3 published in 1999). The U.S. submitted INF.43 with detailed comments on the PRBA proposals. **Result**: The Sub-Committee did not agree with this proposal. There was no support to raise the exception limit to 200 Wh for a lithium ion battery and include a limit on the state of charge. There was some agreed upon changes to SP 188. We discuss those under paper 2006/46.
INF.43	**Comments on ST/SG/AC.10/C.3/2005/44 - Lithium ion cell and battery size limits in SP188** (USA)	
2005/45	**New entries for lithium ion batteries** (PRBA) – This paper proposes new entries for lithium ion batteries to distinguish them from primary lithium batteries. Separate entries for batteries and batteries packed in or with equipment are proposed. The proposed entries are: UN XXXX LITHIUM ION BATTERIES (including lithium ion polymer	This paper contained 4 proposals: (1) Create two new PSNs for lithium ion batteries, (2) Consequential editorial amendments to SP 188, (3) Consequential editorial amendments to SP 310, and (4) Consequential editorial amendments to P903. The

	batteries) and UN YYYY LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT Consequential amendments to Special Provisions 188 and 310 and Packing Instruction 904 are proposed.	U.S. submitted detailed comments to this paper in INF.44. **Result**: This proposal was not adopted. The Sub-Committee did not agree that new separate entries for lithium ion batteries were necessary because the conditions of transport were not different from other types of lithium batteries.
INF.44	**Comments on ST/SG/AC.10/C.3/2005/45 - New entries for lithium ion battery** (USA)	
2005/46	**Use of Watt – Hours in place of equivalent lithium content for lithium ion batteries** (PRBA) – In this paper PRBS proposes that the Model Regulations use watt hours rather than equivalent lithium content as a basis for the regulation of lithium batteries.	This paper contained 4 proposals: (1) Replace the term "Equivalent Lithium Content" with "Watt-hours", (2) Require marking of Wh on the outside case of a lithium ion battery (cell), (3) Amend SP 188 with new limit of Wh decided in 2005/44, and (4) Amend the Test Manual in Section 38.3.1, 38.3.2.2 and 38.3.3 (based on Rev. 4). The U.S. provided detailed technical comments in INF.45. **Result**: The Sub-Committee agreed there was a correlation between the equivalent lithium content and the minimum energy expressed in Watt-hours for lithium ion cells and batteries. They further supported the use of Watt-hours considering it is a standard means of expressing rated energy and is more widely understood. Therefore, they agreed to the proposal to use Watt-hours instead of the term ELC for lithium

		ion cells/batteries. However, there was no support for changing SP 188 to use 200 Wh as the limit, so PRBA changed their proposal to allow up to 100 Wh per battery which was considered equivalent to the current limits in SP188. This decision was connected with the decision not to consider state-of-charge. The Sub-Committee also adopted a requirement to mark lithium ion batteries subject to the provisions of SP188 with the Wh rating. Consequential amendments to the Test Manual were also adopted.
INF.45	**Comments on ST/SG/AC.10/C.3/2005/46 - Use of Watt-hours in place of equivalent lithium content for lithium ion battery** (USA)	
2006/50 **INF.11** **INF.15**	**Fuel Cell Cartridges Containing Division 2.1 or 4.3 or class 8 Substances** (USA/France) **–** This paper proposes several new entries be added to the Dangerous Goods List to address fuel cells containing dangerous goods of Divisions 2.1, Division 4.3, and Class 8. The paper proposes separate entries for fuel cell cartridges and for the cartridges when they are packed in or with equipment. The paper also proposes to modify the existing entry for fuel cells containing a flammable liquid and to add a new entry for fuel cells containing a flammable liquid that are packed in or with equipment. A new Packing Instruction P004 is proposed requiring PG III packaging for fuel cell cartridges and strong outer packagings for cartridges packed in or with equipment. Several new special provisions are also proposed to take into account unique considerations for each fuel cell type. **Fuel Cell Cartridges Containing Hydrogen in a Metal Hydride** (Canada) **Fuel Cell Cartridges Containing Division 2.1 or 4.3 or class 8 Substances** (DGAC/USFCC)	The U.S. began working with the USFCC in January 2006 on this proposal and subsequently jointly submitted the proposal with France. We participated in a meeting with USFCC and industry stakeholders on May 23, 2006 to further discuss our proposal and the Informal documents prepared by the DGAC/USFCC and Canada. The two Informal documents were presented offering modifications to the proposals in 2006/50. **Result**: The Sub-Committee reviewed the U.S./France proposal and three INF documents on this topic. The issue was deferred to a lunch time working group led by France to discuss the numerous

INF.25 **INF.56** **INF.68**	**Fuel Cell cartridges containing hydrogen in metal hydride** (Switzerland) **Fuel Cell cartridges containing hydrogen in metal hydride** (ISO) **Report of the Working Group on Fuel Cells, 6 July 2006**	details and determine what provisions could be adopted at this session. Based on comments from the SC, it was evident that the provisions for the two Class 2.1 entries were more complicated and would require additional consideration. Therefore, the working group concentrated on finalizing amendments for the entries concerning the Class 4.3, Class 8, and consequential amendments to the existing Class 3 entry. The Sub-Committee agreed to include new single entries for the Class 4.3 and 8 entries. They further agreed to amend the description for the Class 3 consistent with the proposal. Other notable amendments included the requirement for a 1.2 m drop test on the cartridge design type and PG II performance packaging. The Sub-Committee will consider provisions for the two Class 2.1 entries based on a future proposal. The U.S. expects a proposal addressing the Class 2.1 entries to be submitted to the next session. The revised amendments were submitted to the Sub-Committee in INF.68 and adopted.
	Agenda Item 6(b) Infectious substances	
2006/3	**Infectious substances; Definition of cultures** (Germany) - In this paper Germany proposes revised definitions for cultures on the basis that the current system impedes the transport of routine samples vital for treatment and public health purposes. The proposal divides cultures into cultures for diagnostic purposes and cultures for industrial or scientific use. Several entries on the Category A list are proposed to be modified to only	We did not support subdividing the current definition into diagnostic and industrial/scientific use categories. **Result**: Many experts did not support this proposal. They argued

	include cultures for industrial or scientific use.	that cultures should be classified based on risk, not on the basis of why they were being transported. Germany indicated that the Joint Meeting had approved this amendment for inclusion into the ADR/RID to facilitate the transport of three infectious substances in particular. This led to some members expressing regret over a situation of modal disharmony. Since there did not seem to be enough support, the proposal was withdrawn.
2006/13	**Infectious substances: Classification of "Medical or Clinical Wastes"** (Germany) - This paper proposes that text be added to the model regulations noting that for classification of medical waste, "international, regional or national waste catalogues may be taken into account."	The U.S. noted this paper did not alter the current classification criteria for medical waste known or suspected of containing infectious substances and did not oppose the proposal. **Result**: This proposal was adopted.
2006/16	**Packing Instruction P650 Requirements regarding dry ice and liquid nitrogen** (Austria) - This paper suggests that the current exceptions for infectious substances are not clear with respect to what is required when using dry ice and/or liquid nitrogen. Austria proposes to amend P650 as follows: "When dry ice or liquid nitrogen is used to keep the substances cold, the applicable requirements of Chapter 3.3 Special Provision 297 shall be met for the dry ice and the packing requirements approved by the competent authority shall be met for the liquid nitrogen." (Rest unchanged). Austria also proposes to amend SP 319 as follows: Substances and where applicable dry ice or liquid nitrogen used to keep them cold, packed and marked in accordance with packing	The U.S. did not support this proposal. The current wording makes it clear that for dry ice and liquid nitrogen, all applicable requirements must be met. This would include any applicable packaging, marking, labeling, and documentation requirements. **Result**: The Sub-Committee agreed that there was no need to amend the text, indicating it was sufficiently clear. Austria stated they would attempt to address a clarification with the Joint Meeting.

	instruction P650 are not subject to any other requirements in these Regulations."	
2006/31 **INF.64**	**Infectious substances** (Austria) - This paper proposes amendments to requirements for the transport of infected animal carcasses. Austria proposes to amend the current text which reads as follows: Animal carcasses affected by pathogens of Category A **other than in cultures only**~~or which would be assigned to Category A in cultures only~~, shall be assigned to UN 2814 or UN 2900 as appropriate. Other infected animal carcasses ~~affected by pathogens included in Category B~~ shall be transported in accordance with provisions determined by the competent authority". **Comments on ST/SG/AC.10/C.3/2006/31** (WHO)	The U.S. did not support this proposal. The current wording requires that all animal carcasses affected by a pathogen on the category A list (whether listed as cultures only or not) to be transported as UN 2814 or UN 2900. **Result**: After some discussion within the Sub-Committee, the expert from Austria withdrew the proposal in favor of INF.64 submitted by the WHO. However, there was concern that the WHO proposal would have serious implications and required further consideration. There was no support for this proposal.
2006/34	**Comments on ST/SG/AC.10/C.3/56/Add 1** **Changes to Chapter 2.6 of the Model Regulations** (WHO) In this paper, the WHO expresses dissatisfaction with the following revised text of 2.6.3.2.3.1 and 2.6.3.2.3.6 agreed to by the SCOE in December: *2.6.3.2.3.1 "Substances which contain pathogens but are nevertheless unlikely to cause disease in humans or animals are not subject to these Regulations unless they meet the criteria for inclusion in another class".* Based on a number of specific concerns (see 2006/34) the WHO recommends reverting to the current text of the 14th Revised Edition which states: *2.6.3.2.3.1 Substances which do not contain infectious substances or substances which are unlikely to cause disease in humans or animals are not subject to these Regulations unless they meet the criteria for inclusion in another class.* The WHO also points out that in 2.6.3.2.3.6 the examples in the NOTE excepting certain human or animal specimens have been amended by removing "and antibody detection in humans or animals". The WHO recommends maintaining this example.	The U.S. supported the WHO proposal to maintain the 14th Revised Edition text. **Result**: This proposal was adopted.

2006/46	**Transport of infectious substances – Bulk animal carcasses** (United Kingdom) – In this paper the UK suggests that the Model Regulations do not adequately address the transport of animal carcasses in sufficient detail. The UK proposes to add two new proper shipping names two the Dangerous Goods List to address the transport of animal carcasses. The proposed names are as follows: ANIMAL CARCASSES, BODYPARTS,FLUIDS INCLUDING BLOOD in quantities greater than 4 litres or ANIMAL FOODSTUFFS containing pathogens of Category B, Division 6.2, P650, BK1, BK2, T1, TP1 INFECTIOUS SUBSTANCE AFFECTING HUMANS (animal carcasses, or body parts containing pathogens of Category A), Division 6.2, P620, BK1, BK2 Several consequential amendments to 4.3.2.4.1 are also proposed.	The U.S. was not convinced of the need to introduce new descriptions for the transport of animal carcasses. **Result**: This proposal was submitted to addresses differences in the UNMR and the ADR/RID. Specifically, the UK felt the Joint Meeting considered a need to adopt provisions to address animal carcasses infected with Cat B pathogens, to address infected products such as blood transported in tanks, and to identify that substances assigned to UN2814 (except animal carcasses) should not be allowed in bulk. The Sub-Committee could not agree on this proposal and the UK indicated they would bring back a revised proposal at the next session.
2006/60 **INF.30**	**P650** (IATA) – In this paper IATA proposes to amend P650 to require formal training for shippers of Biological substances, category B. IATA also proposes to add text indicating that the shipper must classify the substance in accordance with 2.6.3.2. **P650, Comments on ST/SG/AC.10/C.3/2006/60 -** (USA)	We did not support applying the full training requirements of Chap. 1.3 to shippers and carriers of Category B substances. However, we did agree with the principle presented by the IATA document that individuals responsible for classifying the material should be knowledgeable on how to do so in accordance with the transport regulations. We submitted alternative text in INF.30 for consideration if the Sub-Committee agreed of the necessity to include something related to training in P650. **Result**: Many experts considered it was obvious that the classification requirements in 2.6.3.2 applied,

		otherwise it would not be possible to apply the provision in P650. The proposal to reference the training requirements of Chap 1.3 was voted on and not adopted.
	Agenda Item 6(c) Miscellaneous	
2006/9	**New Special Provision for cleaning pads containing environmentally hazardous substances** (ICCA) - This paper proposes a new special provision exempting cleaning pads containing an environmentally hazardous liquid or solid from classification as environmentally hazardous.	**Result**: The U.S. supported this proposal and it was adopted.
2006/10	**Nitric acid UN 2031** (ICCA) (ICCTA) - This paper proposes to add a new special provision to packing instruction IBC02 to limit the use of composite IBCs with plastic inner receptacles to two years from their date of manufacture when used to transport nitric acid. This requirement would be consistent with special packing provision PP81 which currently applies a two year limit on plastic drums and jerricans.	The U.S. did not oppose this proposal. **Result**: The proposal was adopted and will include both rigid plastic IBCs and composite IBCs with a plastic inner receptacle.
2006/11	**Amendments to provisions for chlorosilanes** (ICCA) - This paper proposes a number of amendments, including a new packing instruction, to address the transport of chlorosilanes. ICCA points out that the current UN definition of a water reactive material only includes materials that emit flammable gases. As such a number of flammable silanes that emit toxic gases in contact with water are assigned to Class 3. ICCA points out that as such the packaging provisions assigned, while appropriate for a flammable material, do not adequately address the risk posed by silanes which emit toxic gases in contact with water.	The U.S. supported this proposal in principle. We agreed that the packagings currently authorized for flammable silanes of Class 3 do not provide an adequate level of safety. In the U.S. HMR the definition of a water reactive material includes materials which emit toxic gases in contact with water. Since the UN definition of a 4.3 material does not include such materials, enhancing the authorized packagings is a reasonable approach. **Result**: Several experts felt this was more of a classification problem and suggested consideration of reclassifying certain chlorosilanes. The document was kept on the agenda for the next session to allow

		ICCA to bring additional information to the Sub-Committee.
2006/12	**Organic peroxides** (ICCA) **–** This paper notes that since several new peroxides and formulations have become commercially available, there is a need to update 2.5.3.2.4, IBC 520 and T23. A list of new products, proposed classification, the accompanying competent authority approvals and a summary of the supporting test data are given in the annex to the roposal.	The U.S. supported some but not all of ICCA's proposed changes. We note a lack of consistency with respect to several of the proposals. In certain cases new entries are proposed in the tank and IBC provision tables but not in the Organic Peroxide listing in 2.5.3.2.4. **Result**: The proposed new organic peroxide entries were adopted with some amendments.
2006/19	**Classification criteria for Division 6.1 and Class 8 Human Experience** (United Kingdom) - This paper proposes to amend text regarding the classification of toxic and corrosive substances by human experience. A new section is proposed to be added to both chapters 2.6 and 2.8.	The U.S. did not agree that the text proposed by the UK clarifies how to appropriately classify toxic or corrosive substances by human experience. However the U.S. did agree in principle that the current wording is subjective and that clarification may be appropriate. **Result**: Several experts agreed with the problem expressed by the UK that classification based on human experience posed certain practical problems, including verifying the source of the data. However, this proposal was not acceptable and the UK agreed to submit a revised proposal to the next session.
2006/22	**Amendments to IBC Special Provision Assignments** (USA) **–** At the Sub-Committee's previous (28^{th}) session, the U.S. proposed to correct several inconsistencies with respect to IBC special provision assignments (see UN/SCETDG/28/INF.37). These inconsistencies were noted during the	**Result**: The proposal to revise the assignment of SP instructions for certain substances in accordance with the rationalized approach was

	development of a rationalized approach for the assignment of IBC special provisions. This paper offers revised proposals based on comments received.	adopted. The Sub-Committee agreed to assign B2 and B4 to UN3152 and UN3432.
2006/23	**Proposals to change the classification of UN No. 1017 Chlorine** (Germany) - This paper proposes to add an oxidizing (5.1) subsidiary risk to the entry in the Dangerous Goods List for Chlorine (UN 1017).	The U.S. understood that Chlorine meets the criteria for an oxidizing subsidiary risk, but questioned the need to apply the hazard communication given that it had not been a problem to date. **Result**: Some members agreed that it provided little value to identify the oxidizing subsidiary risk as it seemed negligible compared to the TIH hazard. However, the majority of the Sub-Committee felt that since chlorine met the criteria for oxidizing properties according to ISO 101956, this should be identified accordingly. The proposal was adopted.
2006/33 **INF.70**	**Ethanol and Gasoline Fuel Mixtures – (USA) -** This paper proposes a new entry, "ETHANOL AND GASOLINE MIXTURE, with more than 10% ethanol", be added to the Dangerous Goods List to address ethanol and gasoline mixtures such as the increasingly common alternative fuel "E-85". Although such mixtures may currently be described as "flammable liquid, n.o.s.", the new entry is warranted from an emergency response perspective. The proposed proper shipping name and unique UN number would more clearly indicate the presence of alcohol in the mixture and help to trigger the use of special alcohol resistant foams during fire-fighting/emergency response procedures. **Revision to ST/SG/AC.10/C.3/2006/33** (USA)	**Result**: The Sub-Committee agreed with the need to provide a new description for this material given the expectation of continued increase in the shipment volume. The U.S. was requested to revise the proposal to include alternative names for gasoline and a new special provision similar to SP 243 that is currently assigned to gasoline. The amended proposal submitted as INF.70 was adopted.
2006/36 **INF.71**	**Packing of bromine (UN1744)** (United Kingdom) – This paper proposes a new packing instruction specific to Bromine. **Amendment to ST/SG/AC.10/C.3/2006/36** (UK)	The U.S. did not support this proposal because the requirement to use intermediate metal receptacles when using combination packagings had been removed without

		explanation. This is contrary to recent amendments made to the currently applicable Packing Instruction (P601). **Result:** The proposal was amended taking into account the concerns expressed by the U.S. A revised proposal submitted as INF.71 was adopted.
2006/42	**Chapter 4.1- Use of Packagings - Proposal to amend Special Packing Provision PP1** (CEPE) Special packing provision PP1 is currently assigned to several entries for paint (UN Nos. 1133, 1210, 1263, and 1866). The provision allows for non-specification metal or plastic packagings of up to 5 L capacity to be transported palletized, in unit load devices, or in combination packagings not exceeding a maximum net mass of 40 kg. CEPE proposes that the provision be broadened to include liquid environmentally hazardous substances of Class 9 (UN 3082).	The U.S. did not oppose this proposal. **Result**: Some experts were not in favor of adding PP1 to UN3082 because the dangerous goods entry covered a wide range of substances other than paint products. CEPE indicated they would submit a new proposal at the next session that better identified their proposal would allow paints, additives, printing inks, and adhesives classified under UN3082 to benefit from this special packing provision.
2006/47	**Provisions for the transport of solid substances in bulk containers – Revised rationalized approach** (ICCA) This paper requests comments on a proposed rationalized approach for the assignment of bulk containers (BK1 and/or BK2) to substances in the Model Regulations. The proposed approach is as follows: Class 4.1 – PG III: assign BK1 and BK2 Class 5.1 – PG II – no subrisk: assign BK1 and BK2 Class 5.1 – PG III: assign BK1 and BK2 Class 6.1 – PG III: assign BK2 Class 8 – PG III: assign BK2 Class 9 – PG III: assign BK1 and BK2 (limited to UN 1841-1931)	The U.S. agreed that the majority of substances are allowed in closed bulk bins in the HMR. However, we were concerned some substances, particularly Class 5.1 PG II should not be authorized in closed bulk bins. **Result:** Some experts were concerned the proposal expanded the authorization of bulk containers to more substances than would be authorized under existing modal

	The paper also suggests that current assignments be maintained, irrespective of whether the assignments are in line with the proposed approach.	regulations, especially substances of Class 5.1, PG II. The representative of ICCA will submit a revised proposal to the next session taking into account the comments received and additional input submitted intersessionally (including from the U.S.).
2006/52	**Transport of Nitroguanidine, wetted, (UN 1336) in flexible IBCs** (ICCA) – This paper proposes to allow the transport of the wetted solid desensitized explosive nitroguanadine (picrite) in flexible IBCs. The paper notes that in Germany flexible IBCs have been used safely for 15 years by rail and road with no recorded incidents.	The U.S. reviewed the test results provided by Germany indicating that the packaging is capable of maintaining the 20% water content and also indicating that during the external bonfire of a filled 13H3 flexible IBC test no hazardous effect was observed. **Result**: Several experts expressed concern with the testing, while others raised questions about other packagings that should be considered. There was also concern about allowing a wetted desensitized explosive in a flexible IBC. A vote was taken and the proposal was not accepted. The ICCA suggested the explosive working group further discuss the issue, but it was not taken up by the WG.
2006/57	**UN 1569 Bromoacetone** (Secretariat) - This paper requests that the Sub-Committee review the portable tank instruction and portable tank special provisions for UN 1569 Bromoacetone, noting a disparity between the assigned T-Codes in the UN Model Regulations and the IMDG Code.	Bromoacetone is a toxic by inhalation liquid and as such warrants special consideration. The U.S. suggested a tank assignment of T20 and special provisions TP2 and TP13. **Result**: The Sub-Committee agreed with the comments from the U.S. and

		adopted the revised proposal of T20 and special provisions TP2 and TP13.
2006/58	**Special provision 198** ((Secretariat) – This paper proposes to add SP198 to UN Nos. 3469 and 3470. Special provision 198 allows nitrocellulose solutions containing not more than 20% nitrocellulose to be transported as paint or printing ink as applicable and references UN Nos. 1210, 1263, and 3066. The proposed additions (UN 3469 and UN 3470) are relatively new paint entries that were not considered at the time the provision was created.	**Result:** The U.S. supported this proposal and it was adopted.
	AGENDA ITEM 7 – MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS	
2006/8	**Transport of cargo transport units ventilated after fumigation** (Germany) - This paper proposes to revise the requirements for fumigated cargo transport units to require the fumigant warning sign remain on the unit until the goods have been unloaded, even if the unit has been ventilated. It is proposed that the date of ventilation also be marked on the warning sign. These amendments are consistent with amendments agreed to by IMO for inclusion in the 2006 IMDG Code. The requirement would be revised to read as follows: "The marking, as required by this paragraph, shall remain on the unit until the following provisions are met: (a) The fumigated unit has been ventilated to remove harmful concentrations of fumigant gas; and (b) The fumigated goods or materials have been unloaded." Add Ventilated On (date) before the phrase Do Not Enter	**Result:** The U.S. supported this proposal and it was adopted. The amendments are consistent with provisions adopted by IMO.
2006/15	**Assignment of responsibilities to persons involved in the transport of dangerous goods** (Austria) **–** This paper proposes numerous amendments to the UN Model Regulations to remove statements relative to who exactly is responsible for ensuring compliance with various requirements. Austria suggests that these references are unnecessary and that they conflict with the intent of 1.1.1.3 which states: "In certain parts of these Regulations, a particular action is prescribed, but the responsibility for carrying out the action is not specifically assigned to any particular person. Such responsibility may vary according to the laws and customs of different countries and the international conventions into which these countries have entered. For the purposes of these Regulations, it is not necessary to make this assignment, but only to identify the action	The U.S. did not agree that there is a need to remove all assignments of responsibility within the Model Regulations. The U.S. interprets 1.1.1.3 to mean that it is not always necessary to assign responsibility to a specific party in the Model Regulations. However in certain cases it is helpful and even necessary. **Result:** There was little support for this proposal and no action was taken on the paper. There was some

	itself. It remains the prerogative of each government to assign this responsibility."	discussion about the notion of liability of persons to perform certain tasks, but it was also recognized that numerous national and international legal instruments apply. The majority felt that it was useful or necessary for regulators to provide guidance on assignment of duties to various participants in the transport chain under each legal system. The Sub-Committee did agree to direct the Secretariat to replace the term "shipper" with "Consignor" wherever it appeared in the UNMR.
2006/18	**Overpacks** (FIATA) - This paper proposes amendments to the definition of an overpack and to the text regarding the "overpack" marking. The amendment to the definition would remove the current limitation requiring an overpack to be prepared by a single consignor (the limitation would be retained for Class 7). FIATA notes that the current definition can be interpreted to preclude a freight forwarder or carrier from securing packages in a manner meeting the definition of "overpack" (for example by shrinkwrapping multiple packages on a pallet). The paper also proposes editorial amendments to the text regarding the overpack marking requirement - the proposed text reads as follows: *Overpack* means an enclosure (by a single consignor in the case of Class 7) to contain one or more packages and to form one unit for convenience of handling and stowage during transport. Examples of overpacks: (a) loading tray such as a pallet, on which several packages are placed or stacked and secured by a plastics strip, shrink or stretch wrapping or other appropriate means; or (b) an outer protective packaging such as a box or a crate. 5.1.2.1 "An overpack shall be: (a) marked with the word "OVERPACK"; and (b) marked with the UN number preceded by the letters "UN", and labelled as required for packages in 5.2.2, for each item of dangerous goods contained in the overpack, unless the markings and the labels representative	The U.S. did not support this proposal. We agreed with the IATA INF document that only the consignor can create an overpack when preparing and offering a shipment for transport. We further agreed with IATA that the FIATA paper seems to confuse the intent of the overpack marking and the application of the definition to the carriers loading and securing operation of a transport unit under Chapter 7.1. **Result**: The Sub-Committee agreed that the overpack operation, in particular the marking, is the responsibility of the consignor. It was identified that one of the reasons for this proposal was an amendment agreed to at the Joint Meeting that amended the overpack definition, attempting to take into account consolidation actions of the freight forwarder or the carrier. The change

	of all dangerous goods contained in the overpack are visible. If the same marking or the same label is required for different packages, it only needs to be applied once. 5.1.2.2 Each package of dangerous goods contained in the overpack shall comply with all applicable provisions of these Regulations. The intended function of each package shall not be impaired by the overpack.	in the ADR/RID will result in modal disharmony. Although the proposal was not adopted, some delegations suggested intersessional discussions to address the wider implications and concept of an overpack.
INF.8	**Overpacks - Comments on ST/SG/AC.10/C.3/2006/18** (IATA)	
2006/21	**Transport of solid environmentally hazardous substances in bulk containers** (USA) - This paper proposes to add "BK2" to column (19) of the Dangerous Goods List entry for UN3077. SP 179 in the UN Model Regulations allows the assignment of UN 3077 to transport materials not otherwise environmentally hazardous under the UNMR, but which are considered environmentally hazardous by one or more countries through which the shipment must pass (e.g., DOT hazardous substances). The HMR authorize non-specification bulk packagings (as prescribed in 173.240) for UN 3077; while the UN, IMDG Code and ADR/RID do not. This difference causes difficulties for U.S. shippers transporting internationally. The proposal is consistent with the HMR bulk packaging authorization for this material (i.e., 173.240).	**Result**: This proposal was adopted.
2006/35	**Transport of various substances of Classes 3-9 in portable tanks** (United Kingdom) – This paper proposes that a number of substances not currently authorized in portable tanks be assigned portable tank codes and special provisions.	The U.S. supported this proposal in principle. We expressed some concern with a number of the proposed T Code assignments, especially those proposed for TIH substances since they were generally too liberal (T14 as opposed to T21 or T22). The proposed assignments are based on the rationalized approach for such assignments now appearing in the Guiding Principles document and the U.S. played a leading role in developing this approach. **Result**: Some experts felt that the aim of this proposal was to harmonize provisions with those currently in the

		ADR/RID. There was some concern over authorizing TIH substances, and the need to apply more stringent requirements than those in the proposal. The UK agreed to submit a new proposal to the next session taking into account the comments received and input submitted by experts intersessionally (including the U.S.).
	AGENDA ITEM 8 – HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIAL	
2006/53	**HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIAL** (United Kingdom) – This paper proposes numerous amendments to the Model Regulations with respect to the requirements for the transport of radioactive materials. Annex 1 includes the consolidated text of two previous documents submitted by the UK (ST/SG/AC.10/C.3/2005/19 and UN/SCETDG/28/INF35) as agreed to by the joint UNSCOE/IAEA working group which met in Vienna February 13-17, 2006. Annex 1 proposes: 1. New text for Section 1.2.1 definitions; 2. Text for the new Chapter 1.5 dealing with general requirements for Class 7; 3. A revised Chapter 2.7; 4. Changes to 4.1.9 on packaging; 5. Amendments to Chapter 5.1 which deal with the requirements before shipments and minor changes to Chapter 5.2 which cover marking and labelling; 6. A revised Chapter 6.4 which deals with the inclusion of portable tanks for Class 7 packaging.	The U.S. participated in the joint UNSCOE/IAEA working group and supported the changes indicated in Annex 1. **Result**: The Sub-Committee recognized that the Annex 1 amendments contained changes affecting only the format and provisions of the UNMR, and did not affect the substance of the IAEA regulation. Other than a restructuring of text, three definitions were amended in the UNMR – Competent Authority, Freight Container, and Packaging. Therefore, the proposal in Annex 1 was adopted. The earliest the IAEA will publish any amendments will be 2009.
	AGENDA ITEM 9 – OPTIONS TO FACILITATE GLOBAL HARMONIZATION OF TRANSPORT OF DANGEROUS GOODS REGUALTIONS WITH THE UN MODEL REGUALTIONS	
2006/5	**A world convention on dangerous goods transport safety** (World Nuclear Transport Institute (WNTI)) - The WNTI suggests that as a first step to considering the need for a World Convention, an analysis of existing	For the reasons stated in response to 2006/38 (see below), the U.S. did not favor the concept of a World

	international modal and national regulations be performed. The results could be used to justify the need for a World Convention.	Convention. The U.S. welcomed WNTI's efforts especially in relation to identifying differences which have posed operational problems with respect to the transport of radioactive materials.
2006/38	**Harmonization through a World Convention** (Netherlands) - This paper addresses the issue on harmonization through a World Convention. The Netherlands argues strongly in favor of establishing a multimodal World Convention.	The U.S. supported all efforts to enhance global harmonization of the dangerous goods transport regulations. However, we did not believe that establishing a new multi-modal World Convention will help to eliminate differences in modal and national regulations. During previous sessions, the Sub-Committee held informal discussions to solicit views and possible options for future work in this area. An area of particular interest seemed to be discussion on relations with other dangerous goods regulatory bodies. Understandably, both ICAO and IMO expressed their concerns over the suggestion of a World Convention and the impact on existing conventions. It was suggested that such a convention could exclude from its scope maritime and air transport; or could include but still place the responsibility of those mode specific issue under the ICAO and IMO. In addition to examples where the modal regulations differed slightly, some delegations voiced issues with the lack of harmonization between national inland transport regulations which impede international transport.

		Result: There continues to be some delegations, primarily European, that favor the pursuit of a World Convention. However, there is an equal number, if not more, countries that are opposed to the concept. Many delegations expressed the same views as the U.S. (see above) and preferred to expend resources on more concrete suggestions such as those proposed by the UK in 2006/43. There was no decision or further direction given by the Sub-Committee on the future of this issue.
2006/43	**First steps in resolving outstanding issues** (United Kingdom) - The UK Proposes that a technical editor be appointed to review the text of the Model Regulations to identify inconsistencies in language and format. Also proposes that material from the Model Regulations be moved to the Manual of Tests and Criteria.	The U.S. continues to support any effort to improve the text of the UN Model Regulations. **Result**: The Sub-Committee discussed in great length the options suggested in this paper. The U.S. was generally supportive and agreed with the Sub-Committee to address these specific suggestions in the next biennium.
	AGENDA ITEM 10 – IMPROVEMENT OF HAZARD COMMUNICATION	
2006/37	**Tolerance for labels deviating from the models of Chapter 5.2** (United Kingdom) - This paper addresses the issue of different opinions in the 28th session Sub-Committee documents ST/SG/AC.10/C.3/2005/50 and informal document UN/SCETDG/28/INF.20. It proposes to amend the general provisions in Ch. 1.1, specifically be adding the following new note to existing paragraph 1.1.1.1. and by adding a sentence to section 1.3.2(a)(ii) with regards to training on the allowance of such variations. *Note: Formats for lettering and images on packagings, documents and other communication media are indicated in the relevant Chapters in these*	The U.S. expressed an understanding for the problem that the UK was trying to address with this proposal, but did not feel this was a significant issue. We have been cautious to ensure that any potential amendments did not cause more harm than good. **Result**: There was no support for this proposal in the Sub-Committee. The

	Regulations. However, minor variations from these, which do not affect the obvious meaning, are acceptable and should not be treated as infractions of the relevant modal regulations. "Minor variations" include the shading or design of symbols, shades of background colours, placement of lines or stripes, omission of punctuation."	U.S. agreed with others that this may potentially cause more problems than it resolves and feel the real solution is for the modal regulations to continue to work toward harmonization with the UNMR.
	AGENDA ITEM 11 – GUIDING PRINCIPLES FOR THE MODEL REGULATIONS	
2006/48	**GUIDING PRINCIPLES FOR THE MODEL REGULATIONS** (United Kingdom) – This paper contains numerous guidelines for developing the Model Regulations. The objective is to capture as much as possible the logic behind the Model Regulations in a single document that can be referenced by the UNSCOE to facilitate future work.	The U.S. supported the work in developing the guiding principles and supports the adoption of the guiding principles for use by the UNSCOE in developing and amending the Model Regulations. **Result**: The Sub-Committee agreed this work could be finalized and placed on the UN ECE website following publication of the 15th Revised Edition of the UNMR. Some of the guidance in the document applies to text that is not yet adopted by the Committee. Delegations are responsible for completing a final review and providing the UK with comments in order to prepare a final version for adoption at the next session.
2006/54	**Relation between classification of dangerous goods and conditions of transport** (Netherlands) – This paper reminds the SCOE of the work undertaken by the Netherlands in producing the Dangerous Goods List sorted in order of materials' hazards rather than by UN number or proper shipping name. The table itself is provided as 2006/inf.4	There are no proposals in this paper. The U.S. took a cautious approach to determine where this effort would lead. **Result:** The Netherlands indicated this listing was intended to assist users of the UNMR and facilitate classification. The list is based on the 14th Rev. Ed. and they will update it

		when the 15th Rev. Ed. is completed. They suggested it could be placed on the UN ECE website as part of the Guiding Principles. The U.S. questioned the purpose and need for such a document. We pointed out the two documents had different target audiences. The Guiding Principles was intended for regulators, while the Netherlands systematic list was intended for users of the UNMR. There was also concern about how it would be updated and how we could ensure users understood the UNMR text took precedence if there was a conflict. The Sub-Committee agreed to place the listing on the website along with the Guiding Principles, but provide clear indication as to its appropriate use.
	AGENDA ITEM 12 – ISSUES RELATION TO THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)	
2006/27	**Physical hazards due to explosive properties** **Identification of some open issue not yet properly addressed in the GHS** (Germany) - This paper discusses several subject areas which Germany considers are not adequately addressed by the current GHS. Germany does not provide any specific proposals to solve these issues. Germany wants the TDG Explosive Working Group to discuss them and come up with suggestions. The 4 areas identified by Germany are: (1) Classification of ammonium nitrate, (2) Classification of substances having explosive properties although not classified as explosives, (3) Explosives and explosives articles which are not packed for transport, and (4) Desensitized explosives.	There were no specific proposals in this paper. However, the U.S. has considered the issues raised by Germany and offered the following comments during the Explosives Working Group review: With respect to items 1 and 2, if all sectors affected by GHS adopted the GHS hazard criteria (Categories I to IV), then the materials addressed by items (1) and (2) would already be classified by TDG using the same criteria for physical hazards that is in the GHS. Item (3) basically involves

		manufacturing processes and is outside of the scope for GHS. If the concern is with respect to the work place them the hazards can be communicated by the MSDS, warning label, or other instructions. Item (4) can be addressed by communication rather than by creating a separate category. Desensitized explosives are properly tested, classified, and packaged for transport. In the work place or in use additional warnings could be communicated to enhance worker/user safety. **Result:** This paper was referred to the Explosive Working Group and the results outlined in their report under INF.65. The Sub-Committee approved the conclusions in the report related to sections 10, 11, 15, and 16 – except for 11(d) related to desensitized explosives. For desensitized explosives, the WG could not agree and therefore came up with three options for consideration by the plenary. There was no clear majority on the three options and the Sub-Committee decided additional assessment of the implications was necessary to determine the best way to proceed. The Sub-Committee also agreed with the amendments outlined in items 5, 6, 7, 8, and 10 related to consequential amendments to the GHS. These amendments were

		subsequently approved by the GHS Sub-Committee.
2006/28	**Physical hazards of chemically unstable gases** **Identification of some open issues not yet properly addressed in the GHS** (Germany) - This paper questions whether "Chemically unstable gasses i.e., gasses (including mixtures) that may decompose or polymerize" dangerously have been adequately addressed by the GHS. Again, Germany does not provide any specific proposal other than to suggest that the issue be discussed by the TDG Explosive Working Group.	There were no specific proposals in this paper. The U.S. did not see a need for the TDG Sub-Committee to take any action on this item. The issue of chemical instability (in terms of the potential to decompose or polymerize) is not limited to gasses. Many other chemicals are known to have this property and are adequately addressed in TDG regulations. **Result:** Several experts agreed that the chemical instability of gases could result from many different factors and it would be difficult to define a comprehensive criteria. Experts also generally agreed that transport conditions were properly accounted for, but that hazard communication for other sectors may not be properly addressed. It was decided that Germany would organize an intersessional informal working group to further examine this issue.
2006/51	**Hazards to the aquatic environment** (Netherlands) – This paper proposes that the Sub-Committee reconsider its previous decision to regulate substances as environmentally hazardous if not already meeting the definition of Classes 1-9. The Netherlands believes that any substance meeting the newly adopted GHS criteria should be subject to the corresponding documentation and hazard communication requirements.	The U.S. did not support this proposal. We see no value in applying additional marking and documentation requirements to substances already deemed to meet the definition of another hazard class. We understand that for sea transport it may be necessary to identify certain substances as hazardous to the aquatic environment even when meeting the criteria for another

		hazard class, however that decision should be left to IMO and does not justify the Netherlands' proposal to apply such requirements to all modes. We voiced our position that such an approach would pose an undue economic burden on industry with minimal safety benefit. **Result:** This proposal was not adopted after a close vote. Several delegations continue to insist the mark is necessary to comply with GHS, to facilitate intermodal transport involving vessel, for storage purposes, and to alert emergency responders. Other delegations did not agree that there was any contradiction with GHS or emergency responder needs for land transport, and further insisted adding this mark provides no benefit for handling or response for modes other than maritime.
	AGENDA ITEM 13 – OTHER BUSINESS	
2006/63	**Decisions taken at DGP/20 (ICAO)** – This paper summarizes a number of amendments made to the ICAO Technical Instructions which would be of interest to the TDG SCOE. The paper notes that the ICAO panel took slightly a different approach than the UN Model Regulations on certain issues and highlights those instances in the paper.	**Result:** The Sub-Committee took note of information provided and agreed that the modal bodies should report to the Sub-Committee deviations from the UNMR they have deemed necessary. They further thanked ICAO for their paper and encouraged future reporting along these lines.
2006/64	**Proposed reformatting of the ICAO Packaging Instructions (ICAO)** This paper advises the UN SCOE of the ICAO Packaging Instruction Reformatting Project. The SCOE members are encouraged to inform interested parties about the project and the online survey which is available	There were no proposals in this paper. The U.S. encouraged interested parties to complete the survey.

	through the ICAO website at http://www.icao.int/anb/FLS/DangerousGoods/PackingInstructionsMain.cfm	
2006/65	**Comments on options to facilitate global harmonization (ICAO)** In this paper ICAO notes that at the twentieth meeting of the ICAO Dangerous Goods Panel (DGP/20), a paper based on ST/SG/AC.10/C.3/2005/20 together with the report of the informal discussion which took place at the twenty-seventh session was discussed. ICAO advises the Sub-Committee that it plans to conduct a review of possible areas where further harmonization could be achieved during the upcoming biennium.	There were no proposals in this paper.
2006/66	**Comments on limited quantities (ICAO)** This paper includes extracts from the report of the DGP/20 with regard to limited and excepted quantities. It is provided for information only.	There were no proposals in this paper.
2006/67	**Miscellaneous proposals arising from DGP/20 (ICAO)** In this paper ICAO notes that the Panel opted to require non-specification packaging for exempt human and animal specimens. The UNSCOE is asked to consider a note to this effect be included in the UN Model Regulations. The proposed note for inclusion in 2.6.3.2.3.6 reads as follows: ***"NOTE 2**: For air transport, packagings for specimens exempted under this paragraph must meet the conditions in (a) to (c)"*	**Result:** The U.S. supported the addition of the proposed note and Proposal 2 concerning adding the Note was adopted.
INF.13	**Container/vehicle packing certificate (section 5.4.2)** (ICCA)	**Result:** In this paper, ICCA suggested the certification required for the container packing certificate should be allowed electronically in the same manner as the shipper's certification. This led some delegations to present their opinion that any type of certification is unnecessary. They encouraged ICCA to submit a new proposal suggesting to eliminate the shipper's certification requirement. The U.S. will be following this issue closely for the next session.